

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1x.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-015564**Date Inspected:** 12-Jul-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1100**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** Bernard Docena**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Section**Summary of Items Observed:**

This Quality Assurance (QA) Inspector, Craig Hager was on site at the job site between the times noted above. This QA Inspector was on site to randomly observe Quality Control (QC) personnel perform Non-Destructive Testing (NDT) and to monitor American Bridge/Fluor (ABF) welding operations.

The following observations were made:

1) At weld joint E3/E4 – D2, outside the Orthotropic Box Girder (OBG) section: ABF welding personnel Fred Kaddu (#2188) was using the Shielded Metal Arc Welding (SMAW) process to perform repair welding. QC Inspector Tony Sherwood was present and monitoring the welding.

2) At weld joint W2/W3- D1 and D2, outside the OBG section: QC Inspector Tony Sherwood performed and accepted the visual and Magnetic Particle Testing (MT) on the back gouged weld joint.

3) At weld joint E4/E5 – D1 and D2, inside the OBG section: QC Inspector Jesus Cayabyab was performing a visual and MT inspection on the weld, work was in process and several areas had been marked for grinding.

4) At weld joint E4/E5 - E1 and E2. Inside the OBG section: QC Inspector Bernard Docena had performed and accepted the visual inspection of the weld joint, during a QA verification a small area (50 mm length) of weld with excessive reinforcement was observed. QC Inspector Bernard Docena re-inspected the area and marked the location for grinding.

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5) At weld joint E5/E6 – E1, inside the OBG section: ABF welding personnel Hung Jin Quan (#9340) and Songtao Huang (# 3794) had completed the cover pass on a section of the weld and were in the process of grinding / contouring the face of the weld. QC Inspector Bernard Docena was present and monitoring the work.

At weld joint E3/E4 –D2, outside the Orthotropic Box Girder (OBG) section ABF welding personnel Fred Kaddu (#2188) was using the SMAW process to perform repair welding. This QA Inspector observed the repair excavation was approximately 1,110 mm in length and 14 mm deep. QC Inspector Tony Sherwood stated he had performed and accepted the visual and MT inspection of the excavation the previous work day (Friday, 7/9/10). This QA Inspector performed a verification of the welding parameters and observed the following: 130 amperes using a 3.2 mm diameter E7018H4R electrode. The welding observed appeared to comply with the Welding Procedure Specification (WPS) ABF-WPS-D15-1001-Repair.

At weld joint W2/W3- D1 and D2, outside the OBG section this QA Inspector randomly observed QC Inspector Tony Sherwood perform the visual and MT inspection on the back gouged weld joint. The technique used by QC to perform the MT inspection appeared to comply with the contract requirements. See photo below. Upon completion of the visual and MT inspection QC Inspector Tony Sherwood informed this QA Inspector he had accepted both inspections. This QA Inspector performed a random visual verification and observed the back gouge appeared to have a “U” shape approximately 35 mm side and 14 mm deep. The work observed appeared to comply with the contract requirements.

At weld joint E4/E5 – D1 and D2, inside the OBG section this QA Inspector observed QC Inspector Jesus Cayabyab was performing a visual and MT inspection on the weld, work was in process and several areas had been marked for grinding.

At weld joint E4/E5-E1 and E2, inside the OBG section this QA Inspector observed that QC Inspector Bernard Docena had documented by marking the adjacent weld map in paint stick that he had performed and accepted the visual inspection of the weld joints. This QA Inspector performed a random visual verification and observed a small area (50 mm length) of weld with excessive reinforcement. The area was adjacent to and intersecting longitudinal weld. This QA Inspector observed QC Inspector Bernard Docena was close by and asked him about the inspection. QC Inspector Bernard Docena re-inspected the area, concurred with the findings and marked the location for grinding. Please note that visual inspections were in process at weld joints E4/E5 – D1 and D2 (as noted above) and several indications had been marked for grinding. This weld could easily be repaired at that time.

At weld joint E5/E6 – E1, inside the OBG section this QA Inspector observed ABF welding personnel Hung Jin Quan (#9340) and Songtao Huang (# 3794) had completed the Flux Cored Arc Welding (FCAW) cover pass using the Bug-O track system on a section of the weld and were in the process of grinding / contouring the face of the weld. QC Inspector Bernard Docena was present and monitoring the work.

Summary of Conversations:

As noted above.

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Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mohammad Fatemi (916) 813-3677, who represents the Office of Structural Materials for your project.

Inspected By: Hager,Craig

Quality Assurance Inspector

Reviewed By: Levell,Bill

QA Reviewer